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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,630	02/11/2002	Douglas N. Kimelman	YOR920020023	4522

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EXAMINER	
MITCHELL, JASON D	

ART UNIT	PAPER NUMBER
2124	

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/073,630	KIMELMAN ET AL.	
	Examiner	Art Unit	
	Jason Mitchell	2124	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 February 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This application claims priority to provisional application 60/267,573 filed on 02/09/2001.

2. Claims 1-11 are pending in this case.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,360,360 to Bates et al. (Bates).

The applied reference has a common Assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding Claims 1, 5 and 9: Bates discloses a computer programmed method of minimizing the cost of using a component of a computer program (col. 6, lines 6-9 'Main

memory contains optimizing compiler'), said method comprising the steps of; providing said component with a plurality of explicit selectable alternative implementations (col. 6, lines 39-41 'multiple class definitions for objects') which share a common component interface and semantics (col. 8, lines 66-67 'class implementations with identical interfaces'), instrumenting said component to gather cost-related information during at least a partial run of said program (col. 8, lines 33-35 'inserting instrumentation code'), providing said component with a cost estimator for using said cost-related information to estimate a cost for using each of said explicitly selectable implementations in running said program (col. 8, lines 49-50 'compute a weighted cost for each class'), based on the estimated costs, selecting one of said explicitly selectable implementations for a subsequent at least partial run of said program (col. 6, lines 36-39 'automatically select among different implementations of objects').

Regarding Claims 2, 6 and 10: The rejections of claims 1, 5 and 9 are incorporated, respectively; further Bates discloses a default implementation is used during said at least partial run (col. 8, lines 11-15 'dynamic profiling data may be obtained by executing test code').

Regarding Claim 3: The rejection of claim 1 is incorporated; further Bates discloses the selecting step is carried out by another component operable as a controller (col. 6, lines 36-38 'a mechanism ... select among different implementations of objects').

Regarding Claim 4: The rejection of claim 1 is incorporated; further Bates discloses the selecting step is carried out by an application program (col. 6, lines 36-38 'allows the compiler to automatically select among different implementations of objects').

Regarding Claim 11: The rejection of claim 9 is incorporated; further Bates discloses said selector being operable to choose an alternative implementation based upon a cost measurement by said instrumentation (col. 6, lines 36-38 'a mechanism ... to automatically select ... implementations of objects').

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,324,619 to Raverdy et al. (Raverdy) in view of US 5,752,038 to Blake et al. (Blake).

Regarding Claims 1, 5 and 9: Raverdy discloses a computer programmed method of minimizing the cost of using a component of a computer program (col. 4, lines 48-49 'steps executed on a computer system'), said method comprising the steps of; providing said component with a plurality of explicit selectable alternative implementations (col. 6, lines 14-15 'the adaptive method includes three implementations') which share a common component interface and semantics (col. 6, lines 19-21 'access to implementations are controlled by a switching software wrapper'); and selecting one of said explicitly selectable implementations for a subsequent at least partial run of said program (col. 6, lines 19-27 'asks the selector ... and executes the selected one of the implementations').

Raverdy does not disclose instrumenting said component or estimating costs for using each of said explicitly selectable implementations, but does disclose an 'Adaptation Manager' which determines which implementation should be used (col. 6, lines 35-36 'an adaptation manager for managing such adaptive methods during run-time') based on designer supplied 'adaptation policies' (col. 11, lines 8-11 'adaptation policies are implemented by library designers').

Blake teaches instrumenting said component to gather cost-related information during at least a partial run of said program (col. 2, lines 45-47 'executes an instrumented version of the module') and a cost estimator for determining the cost of the application (col. 7, lines 47-49 'the optimizer program analyzes the execution data') in an analogous art for the purpose of optimizing the execution of the code (col. 2, lines 47-48 'to determine the optimal placement order for each code portion').

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Blake's instrumenting and analysis techniques (col. 2, lines 45-50) in combination with Raverdy's 'adaptation policies' (col. 11, lines 8-11) to cause the 'Adaptation Manager' (col. 6, lines 35-36) disclosed in Raverdy to select the implementations having lower estimated costs, because one of ordinary skill in the art would have been motivated to optimize the execution of the computer program (col. 2, lines 34-36 'the module will require less memory to execute').

Regarding Claims 2, 6 and 10: The rejections of claims 1, 5 and 9 are incorporated, respectively; further Raverdy discloses a default implementation is used during said at

least partial run (col. 19, lines 64-65 'selects a first one of said plurality of first implementations by default').

Regarding Claim 3: The rejection of claim 1 is incorporated; further Raverdy discloses the selecting step is carried out by another component operable as a controller (col. 6, lines 22-27 'asks the selector which implementation it should execute').

Regarding Claim 4: The rejection of claim 1 is incorporated; further Raverdy discloses the selecting step is carried out by an application program (col. 6, lines 35-36 'an adaptation manager for managing such adaptive methods during run-time').

Regarding Claim 11: The rejection of claim 9 is incorporated; further Raverdy does not disclose said selector choosing an alternative implementation based upon said instrumentation, but does disclose an 'Adaptation Manager' which determines which implementation should be used (col. 6, lines 35-36 'an adaptation manager for managing such adaptive methods during run-time') based on designer supplied 'adaptation policies' (col. 11, lines 8-11 'adaptation policies are implemented by library designers').

Blake teaches said selector being operable to choose an alternative implementation based upon a cost measurement by said instrumentation (col. 7, lines 47-49 'the optimizer program ... determine an optimal placement order for each code portion') in an analogous art for the purpose of optimizing the execution of the code (col. 2, lines 47-48 'to determine the optimal placement').

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Blake's 'Optimizer Program' (col. 7, lines 47-49) in combination with

Raverdy's 'adaptation policies' (col. 11, lines 8-11) to cause the 'Adaptation Manager' (col. 6, lines 35-36) disclosed in Raverdy to select the implementations having lower estimated costs, because one of ordinary skill in the art would have been motivated to optimize the execution of the computer program (col. 2, lines 34-36 'the module will require less memory to execute').

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 5,862,386 to Joseph et al.; US 6,487,714 B1 to Azagury et al.; and 6,658,656 B1 to Thompson; 6,769,126 B1 to Pekowski.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Mitchell whose telephone number is 571-272-2728. The examiner can normally be reached on Monday through Thursday and every other Friday from 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on 571-272-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason Mitchell
11/9/04

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